

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Appln. No. 09/254,005

REMARKS

Claims 1, 3 and 5-8 are all the claims pending in the application.

Responsive to the objection to claim 5 as depending from cancelled claims 2 and 4, claim 5 has been amended to depend from claims 1 and 3 alone. Entry of the amendment is respectfully requested.

Claims 1, 3 and 5 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 4,873,148 to Kemp, Jr., et al. The Examiner considered Kemp as teaching a metallic coated particle including a coating consisting essentially of a relatively ductile and/or malleable metallic material. The particles are said to be useful in the formation of thin uniform coatings as applied by physical vapor deposition or chemical vapor deposition. Kemp was further cited as teaching that the coatings are continuous (col. 1, lines 13-20).

Applicants respectfully traverse for the following reasons.

Claims 1 and 3 are directed to a consolidated material of coated powders having thereon a coating film or plural coating films, where the coated powders are mutually adhered at the outermost coating film. Once the powder is prepared, it is molded into a coherent molding by bonding the powder particles to each other by means of the coating film itself present thereon (page 18, lines 21-24 of the specification). Example 1, bridging pages 21-22 illustrates molding the powder as a calcined material by heat treatment under pressure (HIP) to obtain a consolidated material. In comparing the results for Example 1 with Comparative Example 1 (pages 21-22 of the specification), the capacitance of the consolidated material (Example 1) was found to be a factor of six times higher than that of the capacitance of the powder of Comparative Example 1 not subjected to HIP treatment.

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Kemp concerns coated metallic particles formed by a mechanical smearing technique (col. 2, lines 30-32).

The Examiner cited Kemp at col. 1, lines 13-20 as teaching that the particles may be used in the formation of thin uniform coatings as applied by physical vapor deposition or chemical vapor deposition. However, the cited passage concerns prior art coated particles where thin uniform coatings were applied to core particles by physical vapor deposition or chemical vapor deposition. This is not a description of a consolidated material where the outermost coatings are mutually adhered to one another. Rather, this description concerns the uniformity of the coatings on the individual particles. The coatings are continuous, meaning that there are no breaks in the coatings of the individual particles.

Thus, the cited passage does not teach a consolidated material as required by claims 1 and 3, and withdrawal of the foregoing rejection is respectfully requested.

Claims 1, 3, and 5-8 were rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent 5,763,085 to Atarashi et al. Atarashi et al was cited as teaching a powder having multilayer films thereon. The reference was further cited as teaching that the particles may be consolidated as a toner (col. 9, line 37), a heat dissipating sheet (col. 13, line 19) or for heat dissipation of electronic parts (col. 13, lines 13-19).

Applicants respectfully traverse for the following reasons.

In the present invention, base particles are coated with a coating film, such as a metal or a metal oxide, having a uniform thickness, and the coated particles are mutually adhered at the

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coating film to obtain a consolidated material. Accordingly, the present invention provides properties as a “powder” and properties as a “consolidated material”.

The properties as a “powder” include (i) regulation of a uniform and definite film thickness, (ii) expression of effects, such as optical properties (light interference effects), electrical insulating properties, thermal conductivity, etc., by selecting the materials of the base particle and the coating film, and (iii) various film-coating methods, such as a sol-gel method.

The properties as a “consolidated material” are the gist of the present invention, and are obtained by improving the properties of the “powder”. Specific examples are disclosed at pages 19-21 in the present specification. Specifically, (i) a magnetic head for recording/reproducing can be produced which has an extremely low eddy-current loss at high frequencies by arranging the film-coated powders and adhering them, (ii) a high-capacity capacitor can be produced by interposing a ferroelectric film having an exactly even thickness between base particles of a conductor and a coating film of a conductor to form composite particles, and (iii) a glass having optical anisotropy can be produced by coating borosilicate glass on the surface of base particles made of a semiconductor or a conductor, followed by calcining and consolidating.

Notwithstanding the foregoing, Applicants disagree that Atarashi et al teaches that the particles may be “consolidated” as a toner, a heat dissipating sheet or for heat dissipation of electric parts.

Particularly, the toner described at column 9 of Atarashi et al is not a consolidated material. Otherwise, the subject toner would not be operable in a photocopying machine (i.e., the toner particles must flow freely).

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Furthermore, the cited passage at column 13 does not disclose a consolidated material.

This passage is reproduced below.

Specific examples of the use of the powder according to the present invention include white magnetic powder for magnetic toners and *heat conductive powder* having electrical insulating properties. The latter is useful as a filler for sealing compounds for semiconductor or a heat dissipating sheet for insulation and heat dissipation of electronic parts.

Notably, it is a *heat conductive powder* that is used as a filler for a heat dissipating sheet.

This passage does not describe a consolidated material.

For the above reasons, it is submitted that claims 1, 3, 5 and 6-8 are not anticipated by Atarashi et al, and withdrawal of the foregoing rejection under 35 U.S.C. §102(a) is respectfully requested.

Withdrawal of all rejections and allowance of claims 1, 3 and 5-8 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

Respectfully submitted,



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APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

5. (Amended) The consolidated material of coated powders according to [any one of claims 1 to 4] claims 1 or 3, wherein the base particle comprises a magnetic material.